THE CENTER FOR REPRODUCTION OF ENDANGERED SPECIES

CRES Report

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CRES
THE CENTER FOR REPRODUCTION OF ENDANGERED SPECIES
Zoological Society of San Diego
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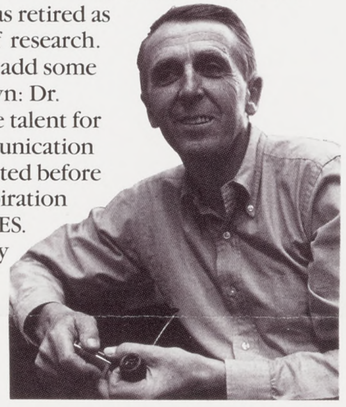
WINTER/1986

During 1985, our work was highlighted by some especially gratifying activities. At the top of the list, certainly, was "Primates: The Road to Self-sustaining Populations." This international primate conference brought together over 400 people from around the world to exchange knowledge and ideas and to bring primate conservation missions into focus. Sponsored and organized by the Zoological Society and the Morris Animal Foundation, the conference was chaired by our own Dr. Kurt Benirschke.■



In describing his colleagues at a recent CRES meeting, Dr. Benirschke chose such words as inspiring, creative, inventive, selfless. He might just as well have been talking about himself, and we would like to borrow his words now, as we report that he has retired as CRES director of research. We'd also like to add some words of our own: Dr. Benirschke's rare talent for fostering communication where none existed before has been an inspiration to all of us at CRES. We are extremely glad he will continue with the Society as a trustee.

On behalf of the world's endangered animals, *thank you for 11 years, Dr. Benirschke.*■

What's in a name? Sometimes, not much. Among certain species of animals, just because they originally were named differently doesn't always mean they *are* different. However, it is extremely important for us to be able to determine significant differences, because such a determination helps zoos decide which animals to save in captivity and helps ensure that different animals which look alike aren't interbred.

We worked during 1985, and are continuing this year, on an ambitious investigation of genetic similarities and differences among wild sheep, goats and their relatives, the bharal, aoudad and tahrs. We also continued what has become the most comprehensive orangutan genetic studies conducted to date, determining the classification of Bornean and Sumatran orangutans by studying blood samples sent to us from zoos across the country.■

Black rhinoceros, lesser pandas, arabian oryx and scimitar-horned oryx were similarly studied to avoid inappropriate mating and thus preserve the genetic integrity of the animals. The year's high point in this area of research undoubtedly was our determination of the blood type of the Russian Przewalski's stallion, Vulkan.■

giant anteater

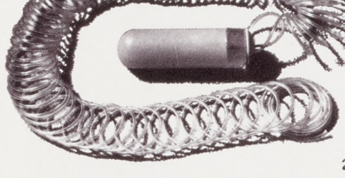
Stocking the Frozen Zoo with exotic animal cell cultures continued during 1985. We collected and preserved embryos, skin cell cultures and semen from such animals as zebras, fringe- eared oryx, impala, Eld's deer, spectacled and Alaskan brown bears, emus, giant anteaters, and bearded dragons. Particularly exciting for us was the demonstration of the potential of pygmy chimp sperm to fertilize an egg after having been frozen for five years.■

Excitement isn't always sublime, however; we also celebrated the simple pleasure of at last having water piped into the cheetahs' breeding facility. After 15 years of hauling water in buckets, this was progress we truly appreciated. The cheetah breeding effort was also enhanced by other improvements to the facility. Young shade trees were planted, the fencing was modified and construction began on new maternity houses. What's more, we're happily awaiting the arrival of seven young cheetahs from South Africa early this year.■

Caution: Research can be hazardous to your health . . . and good nature. Just ask Dr. Benirschke, who traveled to Paraguay last year to study the chromosomes of Chaco peccaries and set the groundwork for a captive herd to be established. He brought back vivid memories of the incredible heat, which was so dry that, even though he drank three huge bottles of soda a day, he never had to visit a bathroom. Unfortunately, one young peccary hadn't gotten that news and dampened the lap of one of Dr. Benirschke's colleagues.■

Motherhood is never easy, but it's especially tough if no one gives you special attention and care. Proceeding on that theory, CRES researchers made good progress in developing ways to detect pregnancy early-on in a variety of animals. Several years of work culminated in 1985 with the development of a technique that enables animals' urine to be analyzed at any site, without the expense and difficulty of shipment to a laboratory.■

Reintroducing Przewalski's horses to the wild has been the work of breeders of these little horses for more than a quarter century. The dream came closer to reality last year, when a CRES geneticist and other experts met in Moscow and wrote an action plan detailing how to reestablish the horses as free-living animals in a steppe habitat in Mongolia. The road to reintroduction still is a long one, filled with such mundane logistical problems as the fact that the release sites are hundreds of kilometers from an airport. Nevertheless, 1985 was a great year for Przewalski's horses, with a record number of them (15 known to date) born in North America alone.■



Good things come in small packages. For proof, look to the little pumps we adapted for use in helping previously infertile animals become pregnant. Implanted under the animals' skin, these pumps release a hormone called GnRH. Cheetahs, iguanas and a white-handed gibbon all were outfitted with the pumps during 1985.■

Now, please don't laugh, but a favorite high point of the year was when *Playboy* published news of our discovery that waterbeds are an excellent way to provide and regulate a healthful, temperature-controlled environment for mother animals and their newborn babies. Not to be left out, the *Wall Street Journal* and *OMNI*, as well as several other publications, spread the waterbed story across the nation.■

Fame hasn't gone to our heads, however. We are reminded daily of how very much we still need to learn from so many of the endangered animals we are working to save. The rare golden monkeys loaned to the Zoo from China last year are a good case in point. In studying this pair of strikingly beautiful animals, we were astonished to observe a behavior never seen before in any primate. These monkeys had a habit of making a long, drawn-out wailing noise through their noses without moving their mouths, making any facial expressions or gesturing in any way. It was almost as if they were imitating a ventriloquist, making it difficult for observers to locate the source of the noise. Having seen just these two golden monkeys in an artificial setting, we're looking forward to learning more by observing larger numbers in the wild in China.■

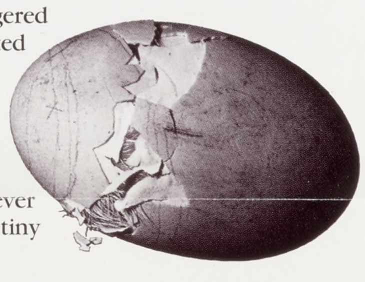
Sumatran orangutan

CRES Report is designed by Tim Reamer.

And speaking of learning more, that's what will be the key to survival of endangered species. The only way to save animals as they are in nature is to save nature itself, and to accomplish this requires a change in people's attitudes throughout the world. All of us at CRES have been involved in public education throughout 1985. We believe that, as researchers, we must be teachers, too.■

We've said it before, but it's definitely worth repeating: To succeed in improving reproduction of endangered species only to have new babies felled by infectious diseases would be to achieve an empty success. Happily, 1985 was a year of progress for CRES; we made important discoveries regarding some highly dangerous diseases. Deer, antelope, wildebeest, ibex, springbok, snow leopards, cheetah and lemurs—both newborn and adult—were some of the animals with healthier prospects thanks to CRES' ongoing work in identifying causes of infection and, using current biotechnology, developing methods for prevention and protection.

Two stories are of special interest. We were able to identify the cause of neurologic disorder in newborn Angolan springbok at the Wild Animal Park, and, because of this work, a program was begun to vaccinate the Park's springbok herd. A similarly successful effort was launched to reduce the incidence of diarrhea in newborn exotic hoofed animals by feeding special cow's milk for the first three weeks of life.■



Fine news for our feathered friends: Bird endocrine studies were alive and well, with continuing research in three major areas aimed at determining the sex of newborn chicks from egg waste samples. Significant headway has been made through collaboration efforts and our freezer now contains hundreds of samples from endangered birds of prey, crane and parrot species. Efforts to save the California condor and other endangered birds benefitted from our work to improve techniques for determining sex without ever touching the tiny hatchlings.■

The symbol for an eleventh anniversary is steel. As we look back on 1985, we couldn't pick a more appropriate word to characterize CRES' eleventh year. All of us at CRES have had to be strong, too—strong in our continuing commitments to improving reproduction of endangered species and reducing the impact of life-threatening diseases. We've also had to be flexible as we searched for new ways to solve problems and acceptable ways to make the most of what often were limited resources. Another characteristic of steel is that it provides support—most often unseen. And that's where you come in, all of you whose continuing generosity makes our accomplishments possible.

If you would like to help CRES and the animals which are saved through our efforts, please contact Donna Damson, (619) 231-1515, ext. 246.■

The Center for Reproduction of Endangered Species (CRES) is operated by the Zoological Society of San Diego, a non-profit organization.